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4. On the Lepidopterous Insects collected by Mr. G. A. K. Marshall in Natal and Mashonaland in 1895 and 1897.

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(Plate XX.)

The consignment of which the following is an account was received too late to be noticed in my previous paper (P. Z. S. 1897, p. 835); it is, in some respects, of even greater interest, as including not only examples of several interesting new species and of many species new to the Museum series, but also the seasonal forms, authenticated by the donor, of a fair number of

butterflies which have been regarded as distinct, and the varietal character of which is still called in question by some of the leading lepidopterists in this country.

Speaking of the series from Mashonaland, Mr. Marshall observes :—"My Mashonaland collections, which I had intended to take home with me, have only just arrived here (or rather half of them), having been fourteen months coming down from Salisbury! I find among the *Teracoli* a single dry-season male of *T. hildebrandti* (which at the time I took to be a sport of *T. annæ*) and also a female of *T. pallene*, Hopff., which is almost identical with the figure of your *T. infumatus*.

"You will find three males and one female of a '*Lycæna*' from the Karkloof, which Trimen considers to be only a variety of his *L. niobe*, but which I think is probably specifically distinct. It was discovered by Hutchinson and Barker in 1892 on Mr. Ball's farm in the Karkloof District near Maritzburg, and has apparently never been taken elsewhere. From their account (I have never seen it in life) it differs much in habits from typical *L. niobe*. It has been found only within a very limited area, a few acres in extent, flying rapidly over a patch of very long rank grass along the outskirts of a clump of forest, and being on the wing only in *autumn* (viz. March and April).

"*L. niobe* is distributed throughout Natal (it varies above in being either blue or brown), frequenting open country with short grass, and flying with a low, rapid flight; it occurs only during the spring months.

"It will be unnecessary to point out the differences in colouring, the most noticeable of which are the different position of the discal row on underside of secondaries and the presence of the metallic-green spot at anal angle in the 'variety.' I am sorry that the specimens are in such poor condition; they were given to me by Mr. Ball."

Mr. Marshall did not forward the male of "*T. hildebrandti*," but it probably is what he at first supposed—a mere sport of *T. annæ*, corresponding in colouring with the *T. calliclea* (=*hildebrandti*) form of the Nyasa species. The two species are very closely related—little more than local forms, in fact.

As regards the "*Lycæna*," I quite agree with Mr. Marshall that it requires a distinctive name; it certainly is not identical with *Catochrysops niobe*, but is a finer and more brightly coloured species.

The following is a list of the species received in Mr. Marshall's last consignment :—

Nymphalidæ.

Satyrinæ.

1. Samanta perspicua (var. simonsi Butl.).

Mazoe, 4000 feet, 30th October, 1894; Gadzima, 4200 feet, Umfuli River, Mashonaland, 30th July, 1895.

2. Mycalesis selousi Trim.

Enterprise Camp, near Salisbury, 5000 feet, Mashonaland, 23rd June and 2nd July, 1895.
New to the Museum collection.

3. Ypthima doleta Kirby.

Wet form. Salisbury, 5000 feet, 2nd December, 1894.
Dry form. Gadzima, 4200 feet, 7th August, 1895.

4. Ypthima mashuna Trim.

Salisbury, 5000 feet, Mashonaland, 17th and 24th March, 1895.
New to the Museum collection.

5. Pseudonympha vigilans Trim.

Salisbury, ♂ 10th, ♀ 17th March, 1895.

6. Pseudonympha cassius Godt.

Karkloof, Natal, 4200 feet, 31st January, 1st and 5th February, 1897.

7. Pseudonympha sabacus Trim.

Karkloof, 1st, 5th, and 10th February, 1897.

8. Neocænyra extensa, sp. n. (Plate XX. fig. 1.)

♂. Allied to *N. gregorii*, but differing in the much longer costal margin of the primaries, the reddish-orange irides to the ocelli, the more sharply defined black transverse lines on the under surface, the submarginal lines on the secondaries being also much more regular, the postmedian line much less zigzag in character and approaching nearer to the ocelli, the inner line crossing the cell indistinct, but bordered on abdominal area with ferruginous scales; base of costa also ferruginous. Expanse of wings 50 millimetres.
Salisbury, 5000 feet, Mashonaland, 12th January, 1895.
Incorrectly identified as *N. duplex*, which it does not at all resemble.

Nymphalinæ.

9. Charaxes saturnus Butl.

♂. Upper Hanyani River, Mashonaland, 4700 feet, 20th July, 1895.

10. Junonia archesia Cram.

Dry form. Salisbury, 5000 feet, Mashonaland, 19th May, 1895.

10 *a*. Junonia pelasgis Godt.

Wet form. Gadzima, Umfuli River, 4200 feet, 27th and 30th December, 1895.

11. Junonia sesamus Trim.

Salisbury, Mashonaland, 5000 feet, 17th March; Enterprise Camp, Salisbury, 21st June, 1895; Karkloof, Natal, 4200 feet, 20th February, 1897.

12. Junonia calescens Butl.

Junonia octavia var. *natalensis* Staudinger (nec *natalica* Felder).

Gadzima, 4200 feet, Umfuli River, Mashonaland, 2nd, 22nd, and 27th December, 1895.

13. Junonia trimeni Butl.

♀. Marudsi River, Mazoe District, Mashonaland, 1st January, 1895; Gadzima, 4200 feet, Umfuli River, 22nd and 23rd December, 1895.

These were labelled by Mr. Marshall as *J. simia* Wllgr., a much smaller and differently shaped insect, with very different pattern on the under surface and no rosy-whitish discal streak above.

A single small example of *J. simia* was obtained at Gadzima on the 30th December.

14. Junonia aurorina Butl.

Karkloof, Natal, 4200 feet, 29th to 31st January, 10th, 11th, and 17th February, 1897.

This is stated by Mr. Marshall to be the wet-season form of *J. tugela*, but from his own dates it is certain that both fly together in February; moreover, judging them by *J. artaxia*, they both have a dry-season under surface to the wings: I am therefore naturally very sceptical as to the identity of these two allied species.

15. Junonia tugela Trim.

Karkloof, Natal, 4200 feet, May 1896, and 20th February, 1897.

16. Junonia cuama Hewits.

Dry form. Enterprise Camp, near Salisbury, 5000 feet, Mashonaland, 7th July; Gadzima, 5th August.

Wet form. Mazoe District, 4000 feet, 1st November, 1895.

As I have suspected for some time, the seasonal forms of this species differ very little: that of the wet season has the black markings of the upper surface more pronounced, the costa of primaries rather shorter (giving a squarer character to the wing) than in the dry form, the markings below much better marked and the discal spots more decidedly ocelloid. I am now quite satisfied that *J. trimeni* has nothing to do with *J. cuama* or with *J. simia*. It will be remembered that I have always opposed the amalgamation of these three very dissimilar species on the ground that they are undoubtedly on the wing simultaneously at all seasons.

17. Junonia elgiva Hewits.

Malvern, Natal, 800 feet, 22nd and 30th March, 1897.

18. Junonia clelia Cramer.

♂ ♂. Gadzima, 4200 feet, Umfuli River, Mashonaland, 29th August and 2nd December, 1895.

One of the specimens is a curious aberration in which the large blue patch on the secondaries is crossed near its apical outer border by three large more or less oval black spots; just in front of the blue patch is a scar, probably indicating some injury done to the pupa, which apparently has modified the deposition of pigment in the scales.

19. Junonia artaxia Hewits.

Gijima, Umfuli River, 29th July; Gadzima, 3rd October, 1895.
Wet form. J. nachtigali Dewitz.
Gadzima, 27th and 28th December, 1895.

20. Hypolimnas misippus Linn.

Gadzima, 22nd, 27th, and 30th December, 1895.

21. Hamanumida dædalus Fabr.

Salisbury, 23rd March and 18th April; Hartley Hills, Umfuli River, 4300 feet, 25th July; Gijima, 24th August; Gadzima, 4200 feet, 26th December, 1895.

The wet-season phase was obtained from December to the end of March, the dry phase from April to the end of August.

22. Neptis agatha Cram.

Malvern, Natal, 6th and 13th April, 1897.

23. Eurytela hiarbas Drury.

Karkloof, Natal, 9th February and 24th March; Malvern, 27th March, 1897.

Acræinæ.

24. Acræa lycia Fabr.

Malvern, 800 feet, Natal, 13th April, 1897.

25. Acræa rahira Boisd.

Marudsi River, Mazoe District, Mashonaland, 1st January; Gadzima, 22nd August, 1895.

26. Acræa nohara Boisd.

♀, Salisbury, 24th March, 9th June; ♂ ♀, Enterprise Camp, 4th July, 1895.

The specimens are marked as "wet" and "dry," but I see no great difference between them; they are all rather small examples, and a varietal name is attached to them: if not already published, it were better that it should not be.

27. Acræa doubledayi Guér.

Wet. ♂ ♀, Malvern, near D'Urban, Natal, 800 feet, 2nd to 4th March, 1897.

Dry. ♂, Gadzima, 4200 feet, Umfuli River, Mashonaland, 11th August; Gijima, 23rd August, 1895.

If the single male from Mashonaland represents the normal dry-season phase, it only differs from that of the wet-season in its inferior size, and would be indistinguishable from starved examples obtained during the rains; both, however, differ very considerably from the wet form of the scarcely distinct *A. nero* of Eastern Africa.

28. Acræa anacreon Trim.

Dry-season form. Karkloof, 4200 feet, Natal, 20th February, 1897.

An extraordinarily well-developed example showing nearly double the usual expanse of wings.

"*Dry*" *and wet form. A. induna*, Trim. Gijima, Mashonaland, 14th August; Gadzima, 18th December, 1895.

The so-called dry form of *A. induna* (because obtained in the dry-season) is a starved and somewhat worn little male, which, in my opinion, is only a belated wet form (provided that the heavy black apex really is seasonal, as it is said to be in certain species in the genus). The black apical patch in this example is slightly reduced, as might be expected; but Mr. Marshall has himself admitted that in some of the species this black patch is a characteristic of the wet season; in any case it is certainly a varietal, not specific, character, inasmuch as we have complete series of intergrades between the extremes in several forms of *Acræa*.

29. Acræa asema Hewits.

Gadzima, Umfuli River, 29th July, 11th, 14th, and 24th August, 1895.

Mr. Marshall considers this to be the dry form of the following, of which he sends one curious example, said to be the intermediate form; it certainly looks like it, but I should like more conclusive evidence than is afforded by one specimen which was obtained almost at the same time (in the same month) as *A. asema*.

30. Acræa violarum Boisd.

"*Intermediate form.*" Hartley Hills, Mashonaland, 27th July, 1895.

31. Acræa caldarena Hewits.

♂ *wet form*, Salisbury, 31st May; ♀ ♀ *dry form*, Gadzima, 4th August and 20th September, 1895.

It would seem that the seasonal forms of this species differ chiefly in size, the dry form being smaller; both phases agree in the large black apical patch, proving that this is not an invariable seasonal character, but by no means proving that it is not so in most of the species which possess it.

32. Acræa petræa Boisd.

Malvern, 800 feet, Natal, 13th April, 1897.

33. Acræa anemosa Hewits.

Gadzima, 4200 feet, Umfuli River, Mashonaland, 31st August, 3rd October, 20th December, 1895.

34. Acræa neobule Doubl.

♂ ♂, Gadzima, 3rd August, 1st December, 1895; ♀ ♀, Malvern, 25th March, 5th April, 1897.

The seasonal forms seem to differ very little.

35. Acræa horta Linn.

♀, Frere, 3800 feet, 24th December, 1896; Estcourt, 4000 feet, 19th January; ♂ ♂, Karkloof, 4200 feet, Natal, 4th and 11th February, 1897.

Lycænidæ.

36. Alæna nyassæ Hewits.

Gadzima, 24th December, Mazoe, 29th December, 1895.

37. Polyommatus bæticus Linn.

Loesskop, 4500 feet, Little Tugela River, Natal, 20th December, 1896.

38. Catochrysops asopus Hopff.

♀ *dry form*, Gijima, 11th August; *wet form*, Gadzima, 19th November, 1895.

39. Catochrysops barkeri Trim.

♀, Malvern, 800 feet, Natal, 11th March, 1897.

40. Catochrysops patricia Trim.

♂ ♂, Loesskop, 4500 feet, Little Tugela River, Natal, 20th December, 1897; ♀ ♀, Gadzima, Mashonaland, 23rd and 25th December, 1895.

41. Catochrysops plebeia, sp. n. (Plate XX. fig. 2.)

Lycæna parsimon Trim. (nec auct. vetust.).

As I have already stated, this is certainly not the Fabrician species, which occurs on the N.-western coast of Africa; it differs from the latter and the nearly allied *L. patricia* in the smoky-brown, somewhat thinly-scaled upper surface of the male, with other minor characters indicated in Mr. Trimen's full description.

♂, Mazoe District, 23rd December, 1894; ♀, Salisbury, 12th January, 1895; ♂, Gadzima, 25th December, 1895; ♀, Estcourt, Natal, 30th December, 1896; ♂, 1st January, 1897.

42. Catochrysops glauca Trim.

♂, Gadzima, 26th December, 1895.

43. Catochrysops ariadne, sp. n. (Plate XX. figs. 3, 4.)

Nearly allied to *C. niobe*, larger; differs above in the narrower deep smoky border to all the wings and the slightly clearer violet ground-colouring. On the under surface all the black and brown spots, which are more numerous, are distinctly edged with pure white; the discal white band immediately following the transverse series of black spots is well defined and pure white in all the wings, whilst in the secondaries it is farther from the outer margin; the submarginal annular markings are much wider, but indistinct on the secondaries; the subanal black spot, however, is considerably larger, encloses a metallic-blue crescent, and is edged internally by a Λ-shaped orange marking: the upper surface of the female is shot with golden cupreous, and towards the base with lilac; otherwise it resembles the male. Expanse of wings 39 millimetres.

Three males and one female, Karkloof, Natal.

This is the species referred to by Mr. Marshall (*vide* Introduction to the present paper) as probably distinct from *C. niobe*. There is, of course, just a possibility that it may prove to be the wet form of *C. niobe*, all our examples of which were obtained in September; but I know of no other *Catochrysops* which exhibits such well-defined seasonal characteristics, whilst the different habits of the two insects are strongly suggestive of specific distinction, though not necessarily conclusive.

44. Catochrysops dolorosa Trim.

Estcourt, 1st and 3rd January, 1897.

45. Catochrysops ignota Trim.

Frere, 19th December, 1896.

46. Catochrysops mahallokoæna Wallgr.

♀, Estcourt, 17th January, 1897.

This species has the neuration of *Catochrysops*, but more nearly the pattern of *Neolycæna*.

47. Neolycæna cissus Godt.

♂ ♂, Gijima, 17th August; Gadzima, 31st December, 1895.

The dry-season form is much smaller and with all the markings below less prominent.

48. Cupidopsis jobates Hopff.

Frere, 24th and 26th December, 1896.

49. Azanus natalensis Trim.

Estcourt, 8th January, 1897.

50. Azanus moriqua Wallgr.

Estcourt, 15th to 21st January, 1897.

51. Azanus jesous Guér.

Gadzima, 6th November, 21st and 24th December, 1895; Estcourt, 15th, 16th, 18th, 19th, and 20th January, 1897.

52. Azanus zena Moore.

Estcourt, 15th to 21st January, 1897.

53. Azanus plinius Fabr.

Salisbury, 9th June, 1895; Estcourt, 19th January, 1897.

54. Nacaduba sichela Wallgr.

Mazoe District, 24th October, 1894.

55. Zizera antanossa Mab.

Salisbury, 9th December, 1894; Malvern, 27th February, 1897. New to the Museum from South Africa; but specimens, apparently of this species, are in the collection from Sierra Leone and Wadelai.

56. Zizera lucida Trim.

Karkloof, 11th February; Malvern, 6th and 13th April, 1897.

57. Castalius hintza Trim.

♂ (as ♀), Malvern, 3rd March, 1897.

58. Lycænesthes liodes Hewits.

♀, Karkloof, 1st February, 1897.

59. Lycænesthes otacilia Trim.

♂ ♂, ♀, Estcourt, 17th and 19th January, 1897.

60. Lycænesthes amarah Lef.

Gadzima, 28th December, 1895.

61. Lycænesthes adherbal Mab.

Mazoe District, 24th, 25th, and 29th October, 1894.

62. Scolitantides bowkeri Trim.

Karkloof, 9th February, 1897.
Probably most nearly allied to *S. thespis*, but approaching *Uranothauma* somewhat in the pattern of the under surface; it is quite new to the Museum collection.

63. Hyreus lingeus Cram.

Gadzima, 17th September, 1895; Karkloof, 29th January, 1897.

64. Zeritis amanga Westw.

Gadzima, 2nd October, 1895.

65. Zeritis harpax Fabr.

♂ ♂, Mazoe District, 24th and 25th October; ♀, 17th November, 1894; ♂, Gijima, 11th August, 1895; ♂ ♂, ♀, Estcourt, 14th, 16th, 19th, and 20th January, 1897.

66. Crudaria leroma Wllgr.

Gadzima, 10th and 18th September, 1895.

67. Lachnocnema bibulus Fabr.

♀, Estcourt, 16th December, 1896; ♀, 1st January, ♀, 19th January, 1897.

68. Lachnocnema durbani Trim.

♀, Estcourt, 30th December, 1896; ♂, 1st January; ♂ ♂, ♀, 3rd January, 1897.

69. Thestor basuta Wallgr.

♂ ♂, Frere, 15th and 19th December, 1896; ♂ ♂, ♀ ♀, Estcourt, 1st, 8th, and 13th January, 1897.

70. Alæides trikosama Wallgr.

Frere, 26th December, 1896; Estcourt, 8th, 14th, and 17th January, 1897.

71. Alæides orthrus Trim.

Estcourt, 17th and 19th January, 1897.

72. Chrysophanus orus Cram.

♂ ♀, Frere, 18th December, 1896.

73. Tingra tropicalis Boisd.

Malvern, 17th, 19th, 20th, 22nd, and 30th March, 6th April, 1897.

74. Myrina ficedula Trim.

Malvern, 5th and 6th April, 1897.

75. Spindasis caffer Trim.

Gadzima, 4th August, 1895.

Dry form, with reduced orange anal patch.

76. Spindasis masilikazi Wallgr. (Plate XX. fig. 5.)

Mazoe District, 31st December, 1894; Gadzima, 29th and 31st August, 4th and 5th September, 30th December, 1895.

77. Spindasis ella Hewits. (Plate XX. fig. 6.)

S. homeyeri, Marshall (*nec* Hewits.).

Distinctly smaller than *S. homeyeri*, the orange markings on the upper surface of the primaries entirely different, consisting normally of a spot in the cell followed by a transverse band

beyond the cell; the former is, however, sometimes carried obliquely downward, so as to unite with the latter (forming a large V-shaped character); the submarginal orange band consists of three portions, a spot near the costa and two transverse irregular bifid (rarely subconfluent) spots below it; the anal orange patch on the secondaries of *S. homeyeri* is replaced by a sordid ashy patch marked with the usual silver spots; the blue areas of *S. homeyeri* are dull greyish lavender in this species. Apart from the pale buffish-brown ground-colour, the under surface of the wings differs entirely from that of *S. homeyeri*: all the markings are edged with brown (not ferruginous or dull red); those of the primaries are emphasized on the costal margin by a series of about eight jet-black spots, they consist of three fairly regular equidistant oblique bands between the base and the end of the discoidal cell, then follows a costal spot followed by an irregular transverse discal band dislocated at second median branch, this again is followed by a more or less defined, partly linear and partly normal band from costa to submedian vein and a very indistinct dusky submarginal line; marginal line jet-black, internal area and fringe white somewhat pearly: the markings of the secondaries consist of two series of three spots towards the base parallel to the abdominal border, an irregular armillate band, acutely elbowed below the first median branch and interrupted on submedian vein, a short somewhat irregular discal band from costa to third median branch, and an unevenly zigzag submarginal band with indistinct outer edging; marginal line black from anal angle to third median branch; all these bands, as usual, have silvery centres; fringe white, excepting at anal angle, where it is black, the spot above it being narrowly black, then dull chocolate, followed by a sprinkling of black scales; the second spot on the other side of the submedian vein is externally of the ground-colour, internally silver followed by a sprinkling of black scales. Expanse of wings 29 millimetres.

Gadzima, Mashonaland, 31st August, 13th and 25th September, 1895.

As Trimen compares this species with his "*S. natalensis*"= *S. caffer* (to which, in my opinion, it has but little affinity), a description of its peculiarities compared with *S. homeyeri* will, I think, be useful to future workers. Hewitson's type is a very poor and damaged male, in which none of the orange bands on the upper surface are united; the union of the two inner bands in one of Mr. Marshall's specimens shows that this species is not nearly related to any of the other described forms in the genus. In the *S. natalensis* group the cell-spot even when elongated into a band does not join the postmedian band, whereas the latter frequently joins the discal band. In *S. ella* the postmedian and discal bands, being perfectly parallel, never could unite.

78. Virachola antalus Hopff.

♀, Mazoe District, 26th October 1894.

79. Iolaus cæculus Hopff.

♂, Gijima, 18th August; ♂ ♀, Gadzima, 18th October and 23rd December, 1895.

80. Argiolaus trimeni Wallgr.

Marudsi River, Mazoe District, 21st December, 1894; Gadzima, 17th September, 1895.

Papilionidæ.

Pierinæ.

81. Mylothris rüppellii Koch.

♂, Enterprise Camp near Salisbury, 30th June, 1895.

The males of this species seem to be either very local or rare, as we previously had only one example received from the Godman and Salvin Collection.

82. Nychitona medusa var. alcesta Cram.

Malvern, 31st March, 1897.

83. Colias hyale var. electra Linn.

♂, Frere, 24th December, 1896.

84. Terias brigitta Cram.

Wet form. ♂, Marudsi River, 31st December, 1894; Salisbury, 16th March, 1895; ♂ ♀, Frere, 24th and 26th December, 1896; ♀, Estcourt, 30th December, 1896; ♂, Malvern, 31st February, 1897.

Dry form. ♀ ♀, Enterprise Camp near Salisbury, 23rd June, 1895; Gadzima, 1st September, 1895.

One of the females taken in June was labelled as a male, but the true dry-season male appears to be excessively rare.

85. Terias marshalli Butl.

Wet form. ♂ ♀, Karkloof, 5th and 13th February, 1897.

86. Terias hapale Mab. var. æthiopica Trim.

Dry form. Mazoe District, 23rd October, 1894; Enterprise Camp near Salisbury, 23rd June and 4th July; Gijima, 14th August, 1895.

I was amused to find some of the specimens labelled *T. æthiopica* and others *T. orientis*, others again altered from one to the other. As a matter of fact, *T. orientis* is the intermediate seasonal form of *T. senegalensis*, and identical with *T. butleri*; possibly Mr. Marshall might now consider the whole as one very variable species.

87. Terias senegalensis Boisd.

Wet form (as *T. butleri*). Salisbury, 12th January, 20th March, 5th May; Gadzima, 21st December, 1895.

88. Teracolus achine var. simplex Butl.

♂ ♀, Gijima, 8th and 18th August, 1895.

The female now sent is the first authentic example of this dry-season form of *T. achine* which I have seen; it is interesting as vaguely resembling the female of the northerly *T. isaura*.

Race T. trimeni Butl.

♂ ♂ (as *T. antevippe*), dry form, Upper Hanyani River, Mashonaland, 20th July, 1895.

89. Teracolus gavisa Wallgr.

♂ ♂, Estcourt, 30th December, 1896; 3rd and 24th January, 1897.

These are all typical wet-season examples.

90. Teracolus exole ♂ Reiche.

Malvern, 8th March, 1897.

The wet form of the male.

91. Teracolus annæ Wallgr.

Hartley Hills, Mashonaland, 24th, 26th, and 27th July, 1895.

The specimens belong to the dry form (*T. wallengreni*), the female somewhat approaching that sex of the fulvous-tipped variation of the closely allied *T. callidia* (=*hildebrandti*).

92. Catopsilia florella Fabr.

♀ ♀, Salisbury, 21st and 25th April, 1895; ♂ ♂, Karkloof and Malvern, 19th February and 7th March, 1897.

93. Pinacopteryx pigea Boisd.

Malvern, 13th April, 1897.

94. Leuceronia argia Fabr.

♀, Karkloof, May 1896; ♂ ♂, February 1st to 11th, 1897.

All the Natal females sent us by Mr. Marshall are far more lightly marked on the upper surface than the more Northern, Eastern, and Western varieties, and all have the base of the primaries orange-vermilion above.

Papilioninæ.

95. Papilio corinneus Bert.

Gadzima, 25th September, 1895.

96. Papilio brasidas Feld.

Malvern, 27th March and 10th April, 1897.

I have always believed this to be the *P. anthemenes* of Wallengren, but I see that Trimen identifies the latter with *P. corinneus*.

97. Papilio ophidicephalus Oberth.

Karkloof, 1st and 4th February, 1897.

98. Papilio euphranor Trim.

Karkloof, 5th February, 1897.

99. Papilio nireus Linn.

Karkloof, 9th and 13th February, 1897.

Hesperiidæ.

100. Eagris jamesoni E. M. Sharpe. (Plate XX. fig. 7.)

Dry form, Gijima, 18th and 19th August; *wet form*, Gadzima, 22nd December, 1895 [1].

101. Sapæa trimeni Butl.

Gadzima, 25th September, 1895.

102. Sapæa paradisea Butl.

Mazoe District, 29th December, 1894; Gadzima, 5th September, 1895.

103. Abantis venosa Trim.

Gijima, 18th August; Gadzima, 4th September, 1895.
This is new to the Museum collection.

104. Caprona canopus Trim.

Karkloof, 9th February, 1897.

105. Pyrgus spio Linn.

Loesskop, 4500 feet, Little Tugela River, 20th December, 1896; Estcourt, 1st January, 1897.
The first of these examples was labelled as "*Hesperia mafa*," and the following was queried as *H. mafa*; the two forms, if distinct, are very closely allied.

106. Pyrgus mafa Trim.

Loesskop, 4500 feet, Little Tugela River, 20th December, 1896.

107. Oxypalpus ruso Mab.

Mazoe District, 27th October, 1894; Enterprise Camp, near Salisbury, 2nd July; Gadzima, 17th August and 19th September, 1895.
These were labelled as *O. harona* Westw., but we possess every link to typical *O. ruso* Mab.; the species is a very variable one, as I suspect the following also is.

[1] The wet form has the ground-colour of the wings smoky brown instead of golden brown and ochraceous (see figure).

108. Parosmodes icteria Mab.

Enterprise Camp, near Salisbury, 7th July, 1895.

I have always believed this species to be the *P. ranoha* of Westwood (now considered synonymous with *P. morantii*, Trimen). The figure of the latter differs from it about as much as do the extreme variations of the preceding species.

109. Parosmodes morantii Trim.

Gadzima, 19th September, 1895.

New to the Museum series. I should not be at all surprised to see intergrades between this species and *P. icteria*: the position of the orange band on the secondaries varies a good deal in our series of the latter species; but the coloration and pattern of the under surface, although very variable, still show sufficient differences to warrant the separation of the two butterflies for the present.

110. Cyclopides metis Linn.

Karkloof, 27th January, 8th and 11th February, 1897.

111. Kedestes macomo Trim.

Malvern, 13th April, 1897.

112. Kedestes tucusa Trim.

Estcourt, ♂ ♀ 13th, ♂ 14th January, 1897.

113. Kedestes wallengrenii Trim.

Frere, 24th December, 1896.

114. Kedestes niveostriga Trim.

Karkloof, 29th and 31st January, 11th February, 1897.

115. Gegenes letterstedti Wallgr.

Estcourt, 1st January, 1897.

This is *G. hottentota* of authors other than Latreille, the latter being (as previously stated) the *G. obumbrata* of Trimen.

116. Gegenes hottentota Latr.

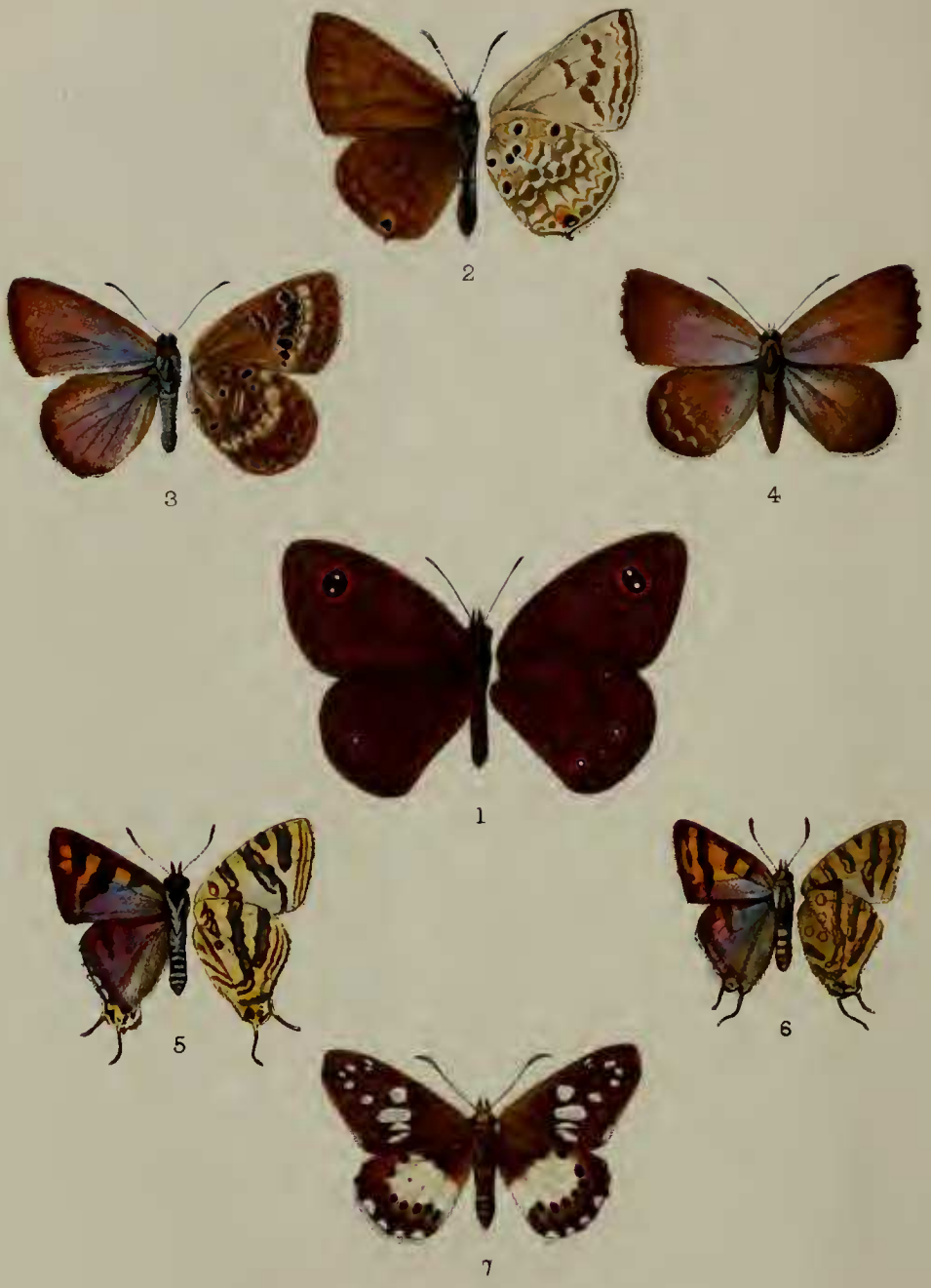
♂, Salisbury, 10th March; ♀, 6th April, 1895; ♀, Estcourt, 3rd January, 1897.

The female of this species is new to the Museum collection. It seems hardly conceivable that a species the male of which has a large brand on the primaries can be a dimorphic form of one without a trace of a brand, but (as Dr. Holland observes) "the females are absolutely indistinguishable."

117. Baoris ayresii Trim.

Gadzima, 10th September, 1895.

New to the general series of the Museum collection, though represented by one example in the Hewitson series.



E. C. Knight del. et lith.

West, Newman chromo.

Butterflies from Natal.

118. PARNARA DETECTA Trim.

Mazoe District, 4th January, 1895.

119. BARACUS INORNATUS Trim.

Karkloof, 30th January and 8th February, 1897.

EXPLANATION OF PLATE XX.

Fig. 1. *Neocænyra extensa*, ♂, p. 188.
2. *Catochrysops plebeia*, ♂, p. 192.
3, 4. *Catochrysops ariadne*, ♂ ♀, p. 193.
5. *Spindasis masilikazi*, ♂, p. 195.
6. *Spindasis ella*, ♂, var., p. 195.
7. *Eagris jamesoni*, ♂ (wet form), p. 199.

March 15, 1898.

Dr. ALBERT GÜNTHER, F.R.S., V.P., in the Chair.

The Secretary read the following report on the additions to the Society's Menagerie during the month of February 1898 :—

The registered additions to the Society's Menagerie during the month of February 1898 were 61 in number. Of these 12 were acquired by presentation, 14 by purchase, 3 were born in the Gardens, 11 were received by exchange, and 21 on deposit. The total number of departures during the same period, by death and removals, was 107.

The Secretary exhibited some photographs of the Beaver-pond at Leonardslea, Horsham, and read the following notes from Sir Edmund Loder, Bart., F.Z.S., on the subject :—

"I sent particulars of my Beavers to Mr. C. J. Cornish, who has written articles about the Beavers in 'Country Life' and in his new book 'Nights with an old Gunner'[1].

"About eight years ago I imported four Beavers from America, and turned them into an enclosure at the bottom of a valley with a small stream running through it. There was at that time a good deal of brushwood and some larger trees, but all these were very soon cut down except a few which I protected with iron.

"It is difficult to know how many young ones were born. One certainly grew up and another was found dead, killed by the others.

[1] 'Nights with an old Gunner and other Studies of Wild Life.' By C. J. Cornish. London, 1897, p. 294.

"The old male must have died after 3 or 4 years. I have bought at different times two or three more Beavers, but I believe these were all killed after a few weeks by two old (probably barren) females. These, therefore, I caught up, and having secured a young male the colony seemed to flourish again. A young one was seen two years ago, but a few months since a young male was found dead, which was probably the same animal. It had most likely been killed in a fight with its father. It is difficult to say how many Beavers there are now, but only three have been seen together lately at any one time.

"The earlier dam was built of small sticks and earth; now the Beavers use much larger sticks, and I think they are doing much more work than ever.

"About 18 months ago I enlarged the enclosure, taking in ground lower down with more of the stream. The Beavers at once set about building a new dam, and bayed up the water back to the old dam, partly submerging it. The object of the dam is to make sure of a pond sufficiently deep to keep it from freezing to the bottom in hard winters. When the water is frozen over the Beavers depend for their living on their winter store of twigs and branches, which they fix in the mud at the bottom of their pond. The mouths of their burrows being under water, they cannot come out when the ice covers the water.

"The growth of the 'lodge' is curious. It can hardly be said that Beavers *build* a lodge, it grows. They begin by making a burrow in the bank, opening under water and rising up into dry land. At the end is a chamber: this they floor with long strips of white wood, which look at first sight like clean straw. As this gets wet and muddy from their feet they put down fresh straw for bedding, and so the floor of the chamber rises. To get head room they scratch away the earth from the 'ceiling' until at last they get through into open air. This hole they stop up from the outside, heaping upon the chamber sticks and mud and turf. The process goes on until quite a high lodge is built."

Mr. R. E. Holding exhibited and made remarks upon a fine pair of horns of the "Sunga" or Galla Ox of Abyssinia, indicating briefly their upright growth and some minor points in the form of the frontal bones and horn-cores, which showed their affinity to the Humped Cattle or Zebus of India, this interesting group also extending into Egypt, Abyssinia, and East Africa down to the Cape. In the Galla country these cattle were said to attain a large size, and to be usually of a bay or brown colour, and to carry enormous horns. A pair in the Royal College of Surgeons Museum were 46 inches long each, and 15 inches in girth at the base. Another pair in the British Museum were 41½ inches long each horn, and 15 inches in girth at the base. Other examples even larger were known. The pair exhibited were slightly under these sizes. The